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COMMITTEE OF EXPERTS ON THE
TRANSPORT OF DANGEROUS GOODS

Sub-Committee of Experts on the
Transport of Dangerous Goods
(Fifteenth session,
Geneva, 29 June-10 July 1998,
agenda item 5 (h))

MISCELLANEOUS DRAFT AMENDMENTS TO THE MODEL REGULATIONS ON THE TRANSPORT OF DANGEROUS GOODS

Amendment to 2.4.2.3.2.4 (self-reactive substances)

Transmitted by the European Chemical Industry Council (CEFIC)

1. INTRODUCTION

During the seventeenth session the Committee, it was agreed that updates of tables on organic peroxides (2.5.3.2.4 and Packing instruction 521 and 522) and corresponding tables for self-reactives, should be submitted by co-ordinating organisations such as CEFIC and HMAC (see document ST/SG/AC.10/R391). Since a new formulation has become commercially available, there is a need to include this it in the relevant table.

2. PROPOSAL

CEFIC proposes to add in 2.4.2.3.2.4, List of currently assigned self-reactive substances, the following entry:

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SELF-REACTIVE SUBSTANCE	Concentration (%)	Packing method	Control temperature (°C)	Emergency temperature (°C)	UN generic entry	Remarks
2,2'-AZODI(ISOBUTYRONITRILE) as a water based paste	≤50%	OP6			3224	

3. JUSTIFICATION

The test result of the Heat Accumulation Storage Test, as prescribed in the Manual of Tests and Criteria, Test H.4, showed that the Self Accelerating Decomposition Temperature (SADT) of the 2,2'-Azodi(isobutyronitrile), not more than 50%, is greater than 55 °C.

According to the United Nations Recommendations on the Transport of Dangerous Goods, 10th revised edition, paragraph 2.4.2.3.4, temperature control in transport is not required, because the SADT is >55 °C.

The SADT determination was performed by Health & Safety Laboratory, Buxton UK, and the test report is given in Annex 1 of this proposal.

Annex 1: Test report on the SADT determination of Azo-di(isobutyronitrile), wetted with not less than 50% water.

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HEALTH & SAFETY LABORATORY

HEAT ACCUMULATION STORAGE TEST REPORT

COMPANY ULTRASEAL Ltd.

SAMPLE Azo-di(isobutyronitrile) wetted with not less than 50% water

SAMPLE FORM Paste

PROCEDURE UN Test Series H Test H 4 Heat Accumulation Storage Test (United Nations Recommendations on the Transport of Dangerous Goods - Manual of Tests and Criteria - *Second Revised Edition* 1995)

TEST CONDITIONS

Test temperature (°C)	56.0 ± 1.0
Dewar size (ml)	500
Dewar heat loss characteristics (mW/kg/K)	84.9
Sample mass (g)	380.7

TEST RESULTS

Lapse time for the sample to warm from ambient temperature to 2K below the test temperature (Hours : mins)	43:00
Lapse time for the sample to warm from ambient temperature to the test temperature (Hours : mins)	51:55
Maximum temperature recorded during 7 days at 56.0 + 1.0°C (K)	2.9
Lapse time for the sample to warm from 2K below the test temperature to the maximum recorded temperature (Hours : mins)	36:20
Lapse time for the sample to warm from the test temperature to the maximum recorded temperature (Hours : mins)	26:20

OVERALL RESULT

The self-accelerating decomposition temperature (SADT) of AZO-DI(ISOBUTYRONITRILE), WETTED with not less than 50% water, by mass, is greater than 55°C.

AZO-DI(ISOBUTYRONITRILE), WETTED with not less than 50% water, by mass, is not subject to temperature control in transport, as it does not meet the requirements of paragraph 2.4.2.3.4 of the United Nations Recommendations on the Transport of Dangerous Goods *Tenth Revised Edition* 1997 which states:

"Self-reactive substances are subject to temperature control in transport if their self-accelerating decomposition temperature (SADT) is less than or equal to 55°C."

Signed A K BROWN Dated: 28/06/97

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